Fig. 6.—Megamœra Bœckii.
,, 7.—Amphithoë quadrimanus.
,, 8.—Podocerus australis.

Plate XXII.

,, 1.—Microdeuteropus tenuipes.
,, 2.—Microdeuteropus Mortoni.
,, 3.—Microdeuteropus chelifer.
,, 4.—Colomastix Brazieri.
,, 5.—Cyrtophium dentatum.
,, 6.—Cyrtophium minutum.
,, 7.—Wyvillea longimanus.
,, 8.—Polycheria tenuipes.

Plate XXIII.

,, 1.—Icilius punctatus, details.
,, 2.—Caprella echinata.
,, 3.—Caprella inermis.
,, 4.—Caprella cornigera.

Plate XXIV.

,, 1.—Caprella obesa.
,, 2.—Iphimedia ambigua.
,, 3.—Œdicerus arenicola.
,, 4.—Montagua Miersii.
,, 5.—Montagua longicornis.

ON THE CYCLOSTOMATOUS POLYZOA OF PORT JACKSON AND NEIGHBOURHOOD.

BY WILLIAM A. HASWELL, M.A., B.SC.

1. Idmonea radians, Lamk.

Retepora radians, *Lamk.*, *Hist. des An. sans Vert. 2nd ed.* p. 279.

Idmonnée rayomante, *M.-Ed.*, *Ann. des Sc. Nat. 2e serie*, t. ix., 1838.

Idmonea radians, *Busk, Catalogue of the Cyclostomatous Polyzoa in the Collection of the British Museum*, p. 11, pl. vii., figs. 1—4.

"Zoarium usually procumbent, stipitate, sometimes suberect; branches dichotomous, radiating more or less regularly in a circular form from the centre, very angular in front; dorsal surface perforated; cells 1—4 in each series, the innermost the longest, aperture (when quite perfect) bilabiate." (Busk.)

This species is extremely common on the shore near Sydney, both in Port Jackson and on the outer coast.

2. Idmonea milneana, D'Orbigny.

Idmonea milneana, *D'Orbigny, Voy. Amér. Mérid., Polypiers, p.* 20, *pl.* ix., *figs.* 17—21; *Busk, l.c., p.* 12, *pl.* xi.

"Zoarium spreading, ramose, dichotomous, each longer branch usually terminating in a pair of short forks; tubes very slightly exserted, flattened and even; aperture wide, margin thick; four cells in each series. Surface finely dotted, slightly sulcate behind; dorsal surface convex, usually marked with concentric lines of growth." (Busk.)

I have some hesitation about placing under this heading a species of Idmonea very commonly dredged in Port Jackson. It seems to approach very near the above named species in general form and habit of growth; but the oral margins of the cells in place of being thick as described by Busk in D'Orbigny's species, are extremely thin and delicate. The "dots" on the surface consist not of impressed dots but of close set minute granules, which are seen under a higher power to be of compressed ovate form, each marked by a mesial longitudinal groove. The colour is light purple.

3. Idmonea Pedleyi, *sp. nov.*

This species which seems to be undescribed, is a near ally of the preceding. The branches are more slender, and the terminal branchlets less expanded; the cells are usually three in a transverse row, they are prominent, usually less than half immersed; their wall is closely ringed, and the peristome is very thin. The whole ventral surface is sparsely ornamented with dots which a higher power resolves into minute spinules; the dorsal surface is smooth. Colour greenish.

Hab. Port Jackson.

I have named this species after my friend Mr. Perceval Pedley, who first called my attention to it.

Genus Pustulopora, Blainville.

4. Pustulopora proboscidea, E. Forbes.

Pustulopora proboscidea, *Johnston*, *Brit. Zoopl.*, 2*nd ed.*, *p.* 278, *pl.* 48, figs. 4—6; *Bush*, *l.c.*, *p.* 21, *pl.* xvii., A. right figure.

"Zoarium slender, branched alternately, cells slightly projecting, four completing a whorl."

Found under large stones a little below low-water mark at Cabbage-tree Bay near Manly, usually growing parasitically on the stalk of a Tubularia.

5. Pustulopora intricaria, Busk.

Pustulopora intricaria, *Busk*, *l. c.*, *p.* 22, *pl.* x., *figs.* 1 *(pars)* and 4.

"Zoarium constituted of short clavate branches very irreqularly disposed and united by frequent anastomoses, so as to form a dense intricate growth; cells slightly ventricose, deeply immersed, sometimes produced into rather long, straight, projecting tubes; ooæcia—?" (Busk.)

Occurs plentifully in the littoral zone under large stones on the coast of New South Wales.

6. Pustulopora parasitica, Busk.

Pustulopora parasitica, *Busk, l. c., p.* 21, *pl.* xvii., figs. 1—2.

"Zoarium about a quarter inch high, usually formed of 1—3 branches, short and truncate; cells usually deeply immersed and very slightly prominent, except in very young specimens. Colour brown with white spots."

Port Jackson, parasitic on *Catenicella ventricosa.*

Genus TUBULIPORA, Lamarck.

7. Tubulipora flabellaris, Johnston.

Tubulipora flabellaris, *Johnston, Brit. Zooph., p.* 274, *pl.* 46, *figs.* 5, 6; *Busk, l. c., p.* 26, *pl.* xxiv., xxv.

"Zoarium adnate, fan-shaped, often recurved on the sides; cells decumbent, cells irregularly disposed, or obscurely serial."

Common on Laminaria in Port Jackson; semingly identical with the British and Scandinavian species above named.

Genus DISCOPORELLA, Gray.

Discoporellæ are very numerous in Port Jackson; a small-leaved species of fucus growing on Clark Island and in other situations is generally so closely covered with these polyzoa, together with a species of *Lepralia,* that the stem is entirely concealed. After a comparison of a considerable number of specimens found on this fucus and in other situations, I am inclined to regard them as consisting of at least five species which I have determined as follows:—

8. Discoporella novæ-zelandiæ, Busk.

Discoporella novæ-zelandiæ, *Busk, l. c., p.* 32, *pl.* 30, *fig.* 2.

"Discoid, cupped; cells tubular, projecting, connate in uniserial radii; peristome bifid; central area (unoccupied by cells) depressed; cancelli large, becoming smaller towards the periphery." (Busk.)

Port Jackson on Fucus; Botany Bay.

9. Discoporella ciliata, Busk.

Discoporella ciliata, *Busk, l. c., p.* 31, *pl.* 30, *fig.* 6.

"Discoid; cells uniserial, 4—6 in each row; diameter of mouth less than that of interstitial cancelli; peristome much produced on one side, nearly vertical, divided into several (2—4) long acute slender spines."

Common in Port Jackson on Fucus.

10. Discoporella porosa, *sp. nov.*

Zoarium orbicular, a little depressed in the centre. Cells disposed very regularly in biserial or triserial rows, becoming longer towards the centre, where they are very much elevated, closely adnate in their whole length; peristome angular, usually a little produced on their outer side. Central areæ occupied by cancelli which are smaller than those between the rows of cells—the latter all nearly circular, a little wider than the mouths of the cells.

Found in Port Jackson.

This species seems to be a close ally of *D. californica*, D'Orb., from which it appears to differ mainly in the smaller size of the central cancelli.

11. Discoporella complicata, *sp. nov.*

Zoarium orbicular, slightly depressed in the centre. Cells not disposed in regular rows, nearly totally immersed at the periphery, a little elevated towards the centre; mouth oblique, nearly circular, peristome entire; wall of cell frequently ornamented with a few acute spicules which are less than the diameter of the cell in length. Central area and intermediate spaces occupied by numerous polygonal cancelli, bounded by slender trabeculæ, from the point of anastomosis of which frequently arises a short perpendicular spinule; cancelli smaller than the mouths of the cells, and occupied in turn by a series of very minute secondary cancelli.

Hab. On Fucus, Clark Island, Port Jackson.

12. Discoporella tridentata, *sp. nov.*

Zoarium strongly convex, of circular outline; margin thin, marked with radiating ridges; cells free, distant, in radiating rows; peristome produced into three points, two (smaller) internal, and one external. Whole surface divided into angular areæ by smooth, semicylindrical, anastomosing trabeculæ, the areæ punctate.

Common on Fucoids, Port Jackson.

Genus CRISIA, Lamx.

13. Crisia punctifera, *sp. nov.*

Cells 9—14 in each internode, elongate, often projecting considerably, with numerous punctations; mouth circular, or elliptical, usually with a small tooth-like thickening behind. Branches arising from the third or fourth cell, usually the third; joints black. Radical tubes 4—5 jointed, punctated, arising from the third or fourth cell, usually the third. Growing in close tufts.

Hab. Manly Beach, Port Jackson, etc.

Allied to *C. denticulata,* but of thicker habit and much more numerous punctations.

14. Crisia incurva, *sp. nov.*

Cells 6—11 in each internode, cylindrical, curved forwards, annulated, with tolerably numerous small punctations; branches arising usually from the first to the fourth cell of the internode. Joints light brown.

Hab. Port Jackson.

Perhaps scarcely distinct from *C. tubulosa*, Busk.

EXHIBITS.

J. Brazier Esq., C.M.Z.S., exhibited a specimen of Fossil *Bulimus senilis*, (sinistral var.) from Isle of Pines, also a new *Cardium* from New Caledonia, and a *Cypræa Bregariana*, dredged at Isle of Pines by Lieut. Heurtel, French Navy.

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WEDNESDAY, JULY, 30TH, 1879.

The Vice-President, W. J. Stephens, Esq., M.A., in the Chair.

DONATIONS.

Seventh Annual Report of the Zoological Society of Philadelphia.

Compte Rendu, Societe Entomologique de Belgique, Nos. 60, 61, and 62.

Guide du Naturaliste Revue Bibliotheque des Sciences Naturelles.

PAPERS READ.

ON A SPECIES OF CORMORANT FROM CAMPBELL ISLAND.

BY F. W. HUTTON, PROFESSOR OF ZOOLOGY, OTAGO UNIVERSITY.

In June 1878, a pair of Cormorants were received at the Otago Museum from Campbell Island. They were both females, but one was adult, the other immature. These birds I described in